CURRENT CLAIM LIST

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Original) A method of detecting or predicting a cerebral disorder, comprising the steps of:

analyzing input biological or physical data using a data processing routine including a set of application parameters associated with biological data correlating with the cerebral disorder to produce a data series,

determining whether a slope of the data series is smaller than a predetermined value;

if the slope is less than a predetermined value, setting the slope to a predetermined number; and

using the data series to detect or predict the onset of the cerebral disorder.

2. (Original) The method of claim 1, wherein the cerebral disorder is bovine spongioform encephalitis.

3. (Original) The method of claim 1, wherein the cerebral disorder is Alzheimer's disease.

4. (Original) The method of claim 1, wherein the data processing routine uses the following algorithm to produce a data series PD2i:

$$PD2i \subseteq \log C(n, r, nref^*)/\log r$$

where $\subseteq$ means scales as, C is the correlation integral for PD2i in which n equals the data length, r equals the scaling range, and nref* equals a location of the reference vector for estimating the scaling region slope of log C/log r in a restricted small log-r range that is devoid of the effects of non-stationary data.

5. (Original) The method of claim 1, wherein the predetermined value is approximately 0.5.

6. (Original) The method of claim 1, wherein the predetermined number is zero.

7. (Original) The method of claim 1, further comprising:

determining a noise interval within the data series; and

if the noise interval is within a predetermined range, dividing the data series by another predetermined number and repeating the step of analyzing to produce new values for the data series.

8. (Original) The method of claim 7, wherein the other predetermined number is two.

9. (Original) The method of claim 7, wherein the predetermined range is – x to + x, where x is any number.

10. (Original) The method of claim 9, wherein the predetermined range is –5 to + 5.

11. (Original) The method of claim 1, wherein the input biological or physical data includes electrophysiological data.

12. (Original) A method of detecting or predicting cerebral disorder, comprising the steps of:

analyzing input biological or physical data using a data processing routine including a set of application parameters associated with biological data correlating with the cerebral disorder to produce a data series;

determining a noise interval within the data series; and

if the noise interval is within a predetermined range, dividing the data series by a predetermined number and repeating the step of analyzing to produce new values for the data series; or

if the noise interval is outside the predetermined range, using the data series to detect or predict the onset of cerebral disorder.

13. (Original) The method of claim 12, wherein the cerebral disorder is bovine spongioform encephalitis.

14. (Original) The method of claim 12, wherein the cerebral disorder is Alzheimer's disease.

15. (Original) The method of claim 12, wherein the data processing routine uses the following algorithm to produce a data series PD2i:

$$PD2i \subseteq \log C(n, r, nref^*)/\log r$$

where $\subseteq$ means scales as, C is the correlation integral for PD2i in which n equals the data length, r equals the scaling range, and nref* equals a location of the reference vector for estimating the scaling region slope of log C/log r in a restricted small log-r range that is devoid of the effects of non-stationary data.

16. (Original) The method of claim 12, wherein the predetermined number is two.

17. (Original) The method of claim 12, wherein the predetermined range is –x to +x, where x is any number.

18. (Original) The method of claim 17, wherein the predetermined range is –5 to + 5.

19. (Original) The method of claim 12, further comprising:

determining whether a slope of the data series is smaller than a predetermined value; and

if the slope is less than a predetermined value, setting the slope to another predetermined number.

20. (Original) The method of claim 19, wherein the predetermined value is approximately 0.5.

21. (Original) The method of claim 19, wherein the other predetermined number is zero.

22. (Original) The method of claim 12, wherein the biological or physical data includes electrophysiological data.

23. (New) A method of detecting or predicting a cerebral disorder selected from the group consisting of human prion diseases, cardiovascular dementia, traumatic dementia, and genetic dementia, the method comprising the steps of:

analyzing input biological or physical data using a data processing routine including a set of application parameters associated with biological data correlating with the cerebral disorder to produce a data series;

determining whether a slope of the data series is smaller than a predetermined value;

if the slope is less than a predetermined value, setting the slope to a predetermined number; and

using the data series to detect or predict the onset of the cerebral disorder.

24. (New) The method of claim 23, wherein the data processing routine uses the following algorithm to produce a data series PD2i:

$$PD2i \subseteq \log C(n, r, nref^*)/\log r$$

where $\subseteq$ means scales as, C is the correlation integral for PD2i in which n equals the data length, r equals the scaling range, and nref* equals a location of the reference vector for estimating the scaling region slope of log C/log r in a restricted small log-r range that is devoid of the effects of non-stationary data.

25. (New) The method of claim 24, further comprising:

determining a noise interval within the data series; and

if the noise interval is within a predetermined range, dividing the data series by another predetermined number and repeating the step of analyzing to produce new values for the data series.